

FIG. 1a

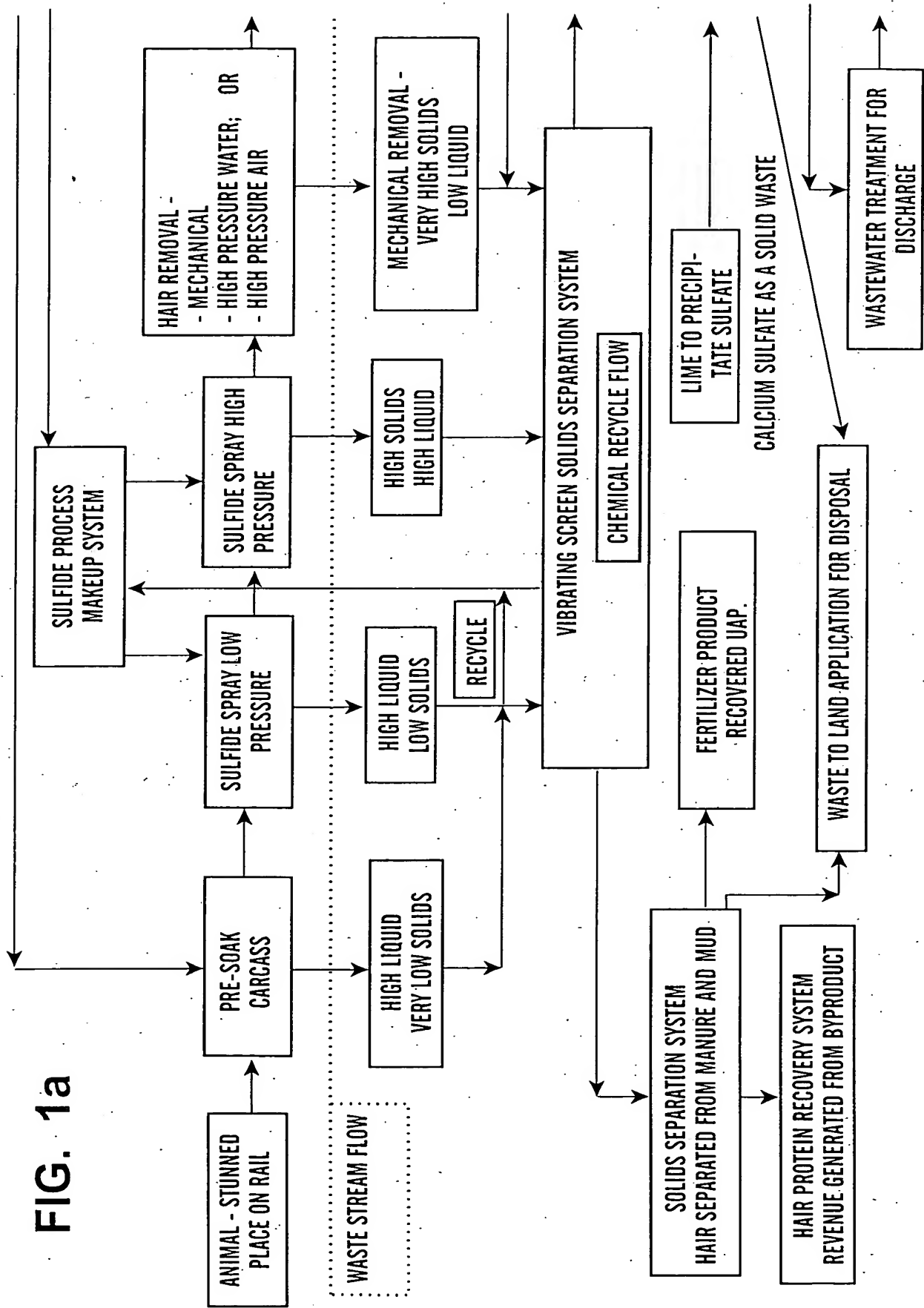


FIG. 1b

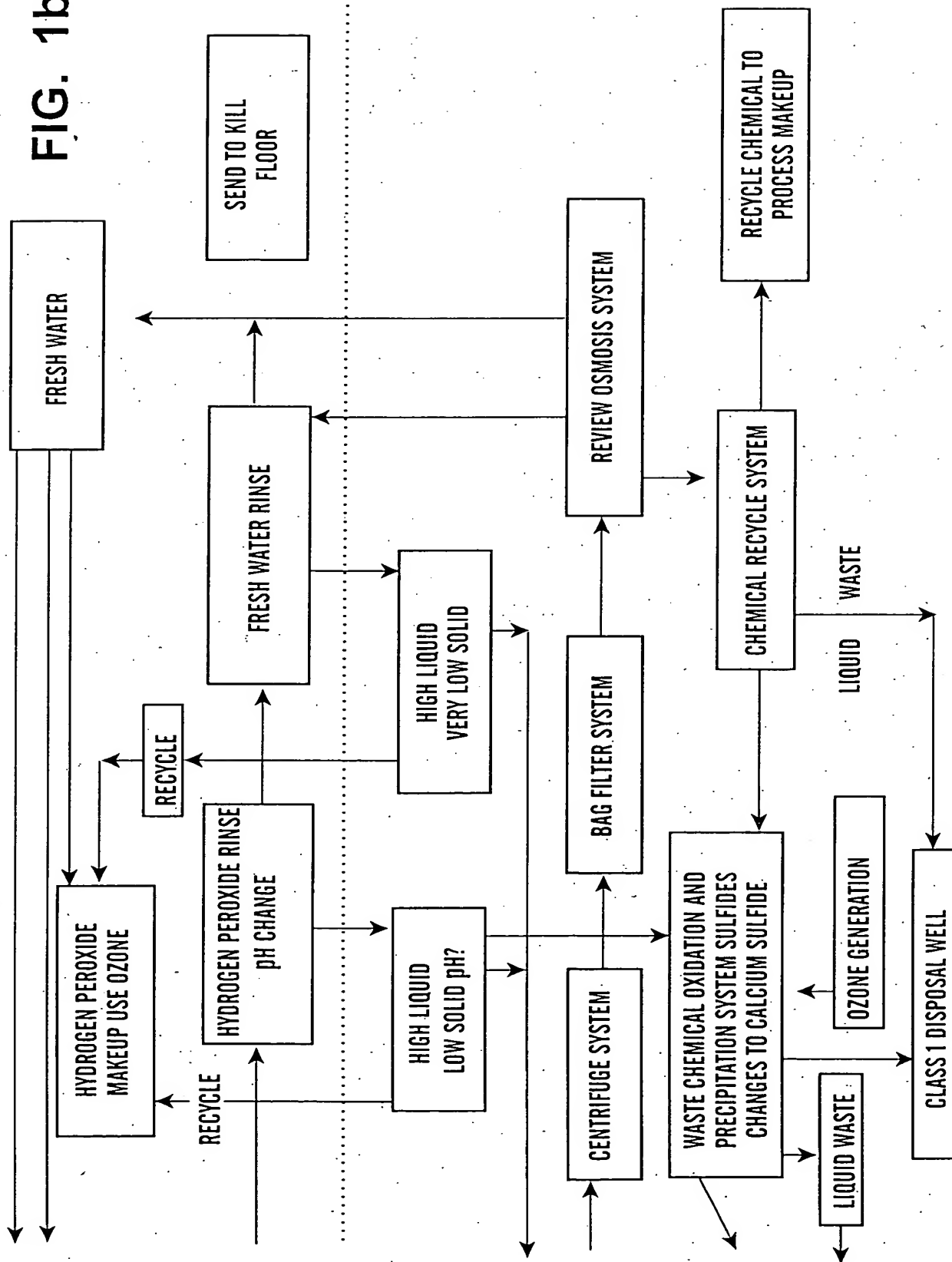
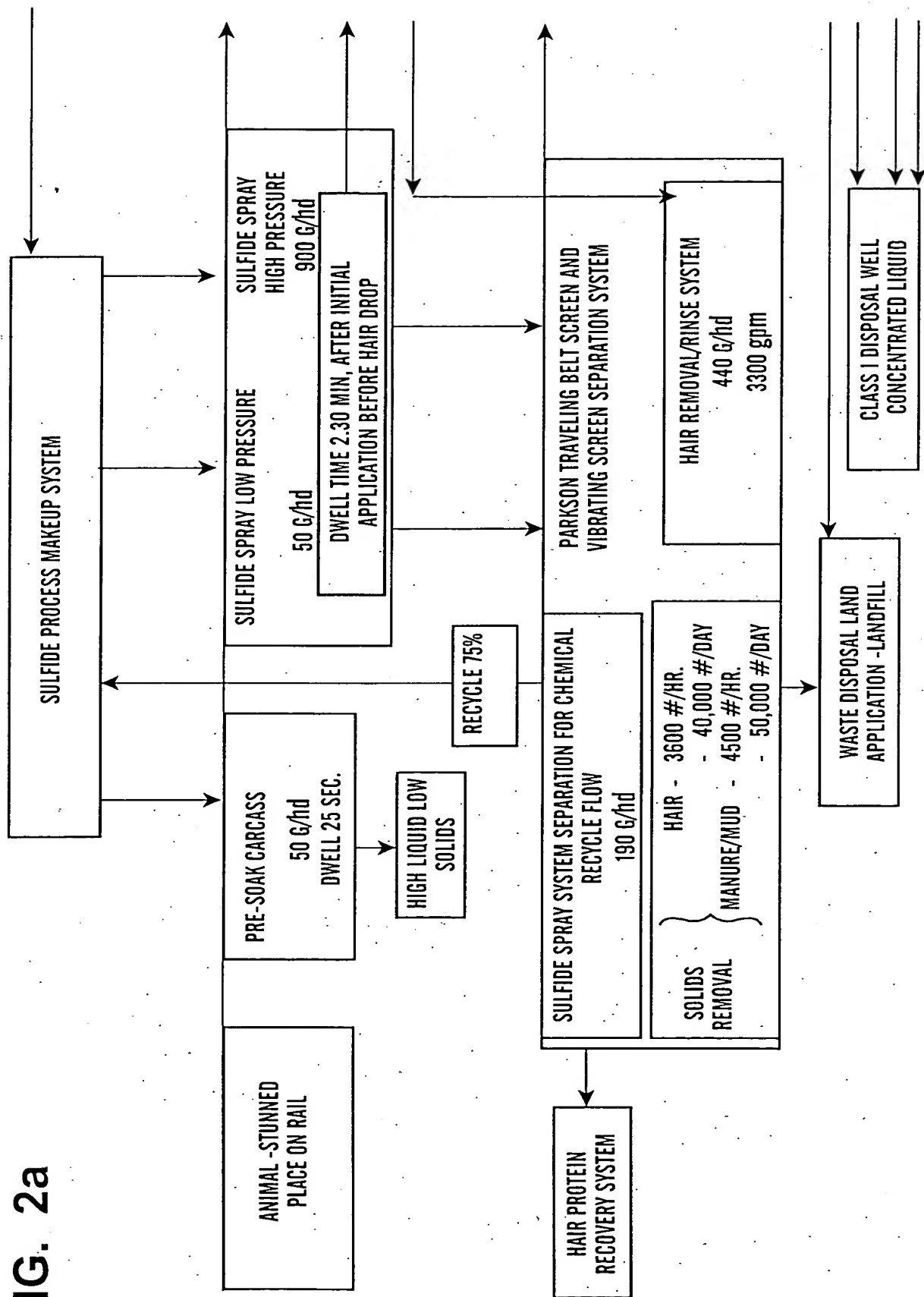


FIG. 2a



**FIG. 2b**

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graph TD
    FW[FWASH] --> H1[HAIR REMOVAL MECHANICAL  
HIGH PRESSURE WATER  
400 G/hd  
DWELL CONTROLLED BY REMOVAL METHOD]
    H1 --> R[RINSE  
40 G/hd]
    R --> F1[FRESH WATER WASH  
300 G/hd  
DWELL TIME 20 TO 40 SEC.]
    F1 --> F2[FRESH WATER RECYCLE SYSTEM  
300 G/hd]
    F2 --> R70[RECYCLE 70%  
308 G/hd  
2310 gpm  
1,540,000 gpd]
    R70 --> FWS[FRESH WATER STORAGE]
    R70 --> RO[REVERSE OSMOSIS SYSTEM  
TWO PHASE SYSTEM  
440 G/hd  
3300 gpm  
2,200,000 gpd]
    RO --> B[RECYCLE 70%  
308 G/hd  
2310 gpm  
1,540,000 gpd]
    RO --> FWS
    RO --> C[CENTRIFUGE SYSTEM  
440 G/hd  
3300 gpm]
    RO --> BF[BAG-FILTER SYSTEM  
440 G/hd  
3300 gpm]
    RO --> CR[CHEMICAL RECYCLING SYSTEM  
39,110 #/DAY  
660,000 gpd]
    RO --> WCP[WASTE CHEMICAL  
OXIDATION AND  
PRECIPITATION]
```

The flowchart illustrates a wastewater treatment system for carcass washing and recycling. The process begins with **FWASH**, which feeds into the **HAIR REMOVAL MECHANICAL** stage (400 G/hd, dwell controlled by removal method). This stage feeds into the **RINSE** stage (40 G/hd), which then feeds into the **FRESH WATER WASH** stage (300 G/hd, dwell time 20 to 40 sec). The **FRESH WATER WASH** stage feeds into the **FRESH WATER RECYCLE SYSTEM** (300 G/hd). The **FRESH WATER RECYCLE SYSTEM** feeds into the **RECYCLE 70%** stage (308 G/hd, 2310 gpm, 1,540,000 gpd). The **RECYCLE 70%** stage feeds into the **FRESH WATER STORAGE** tank. The **FRESH WATER STORAGE** tank feeds into the **REVERSE OSMOSIS SYSTEM** (TWO PHASE SYSTEM, 440 G/hd, 3300 gpm, 2,200,000 gpd). The **REVERSE OSMOSIS SYSTEM** feeds into the **RECYCLE 70%** stage, the **FRESH WATER STORAGE** tank, the **CENTRIFUGE SYSTEM** (440 G/hd, 3300 gpm), the **BAG-FILTER SYSTEM** (440 G/hd, 3300 gpm), the **CHEMICAL RECYCLING SYSTEM** (39,110 #/DAY, 660,000 gpd), and the **WASTE CHEMICAL OXIDATION AND PRECIPITATION** stage.

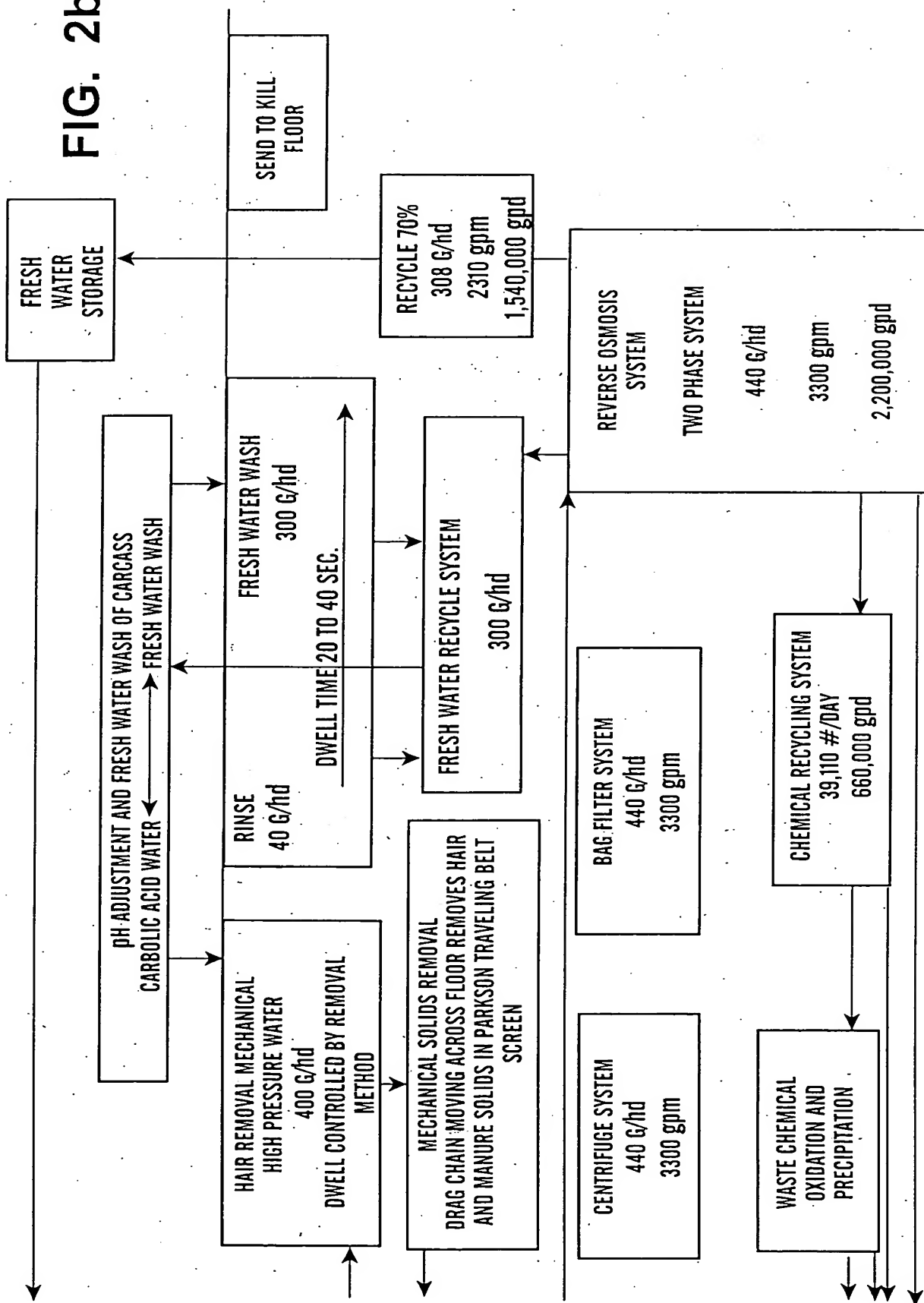


FIG. 3a

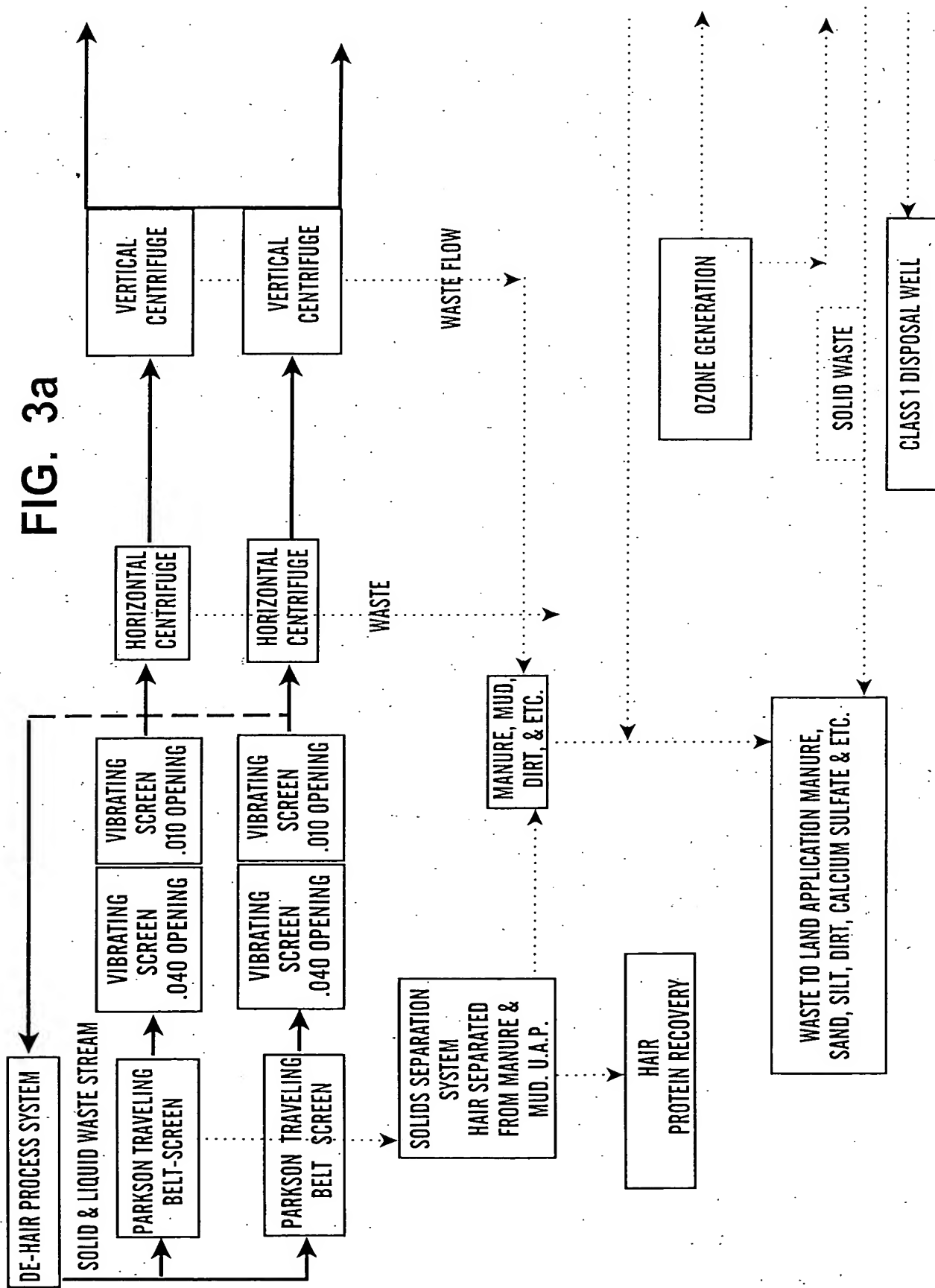


FIG. 3b

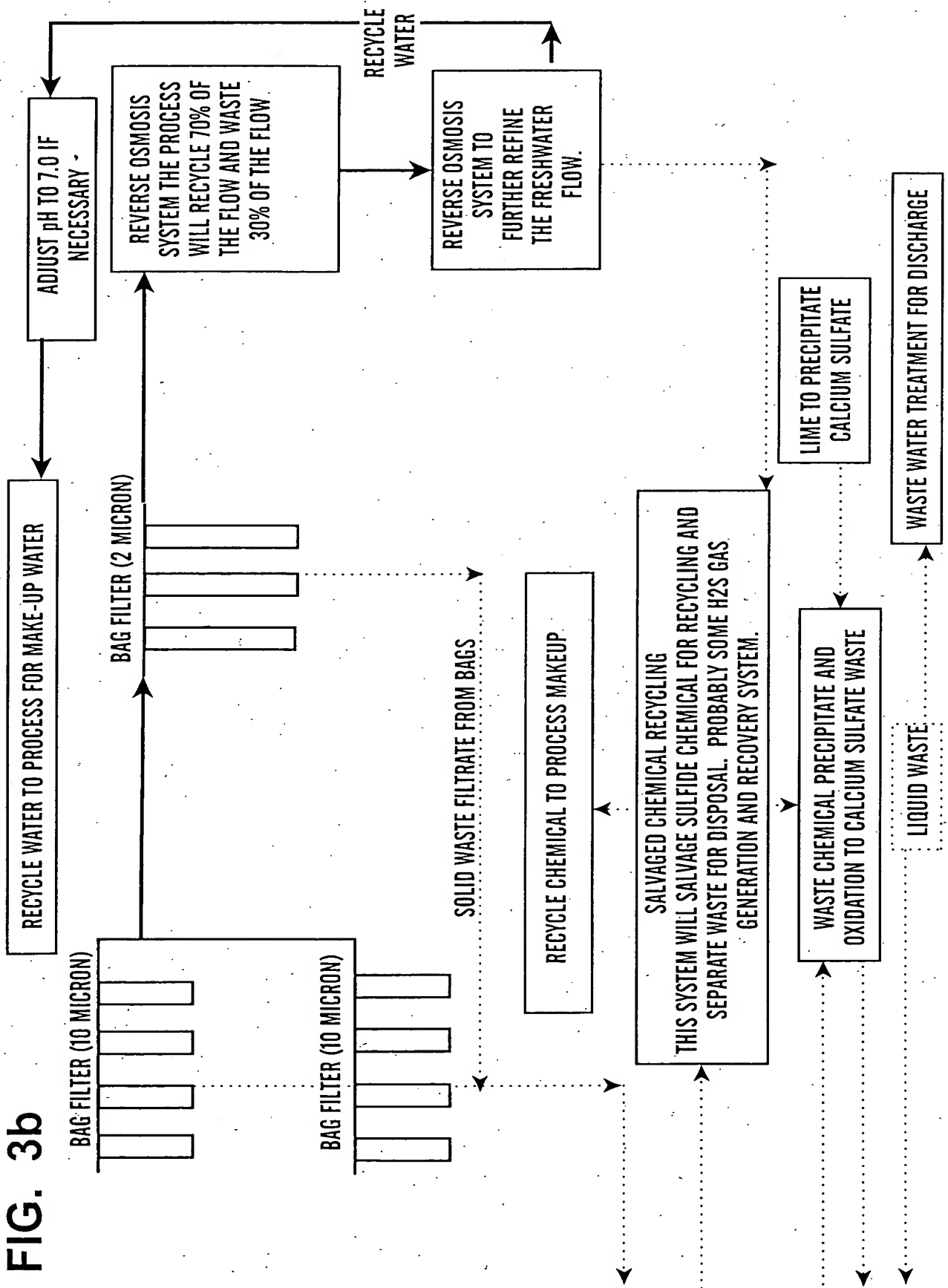


FIG. 4a

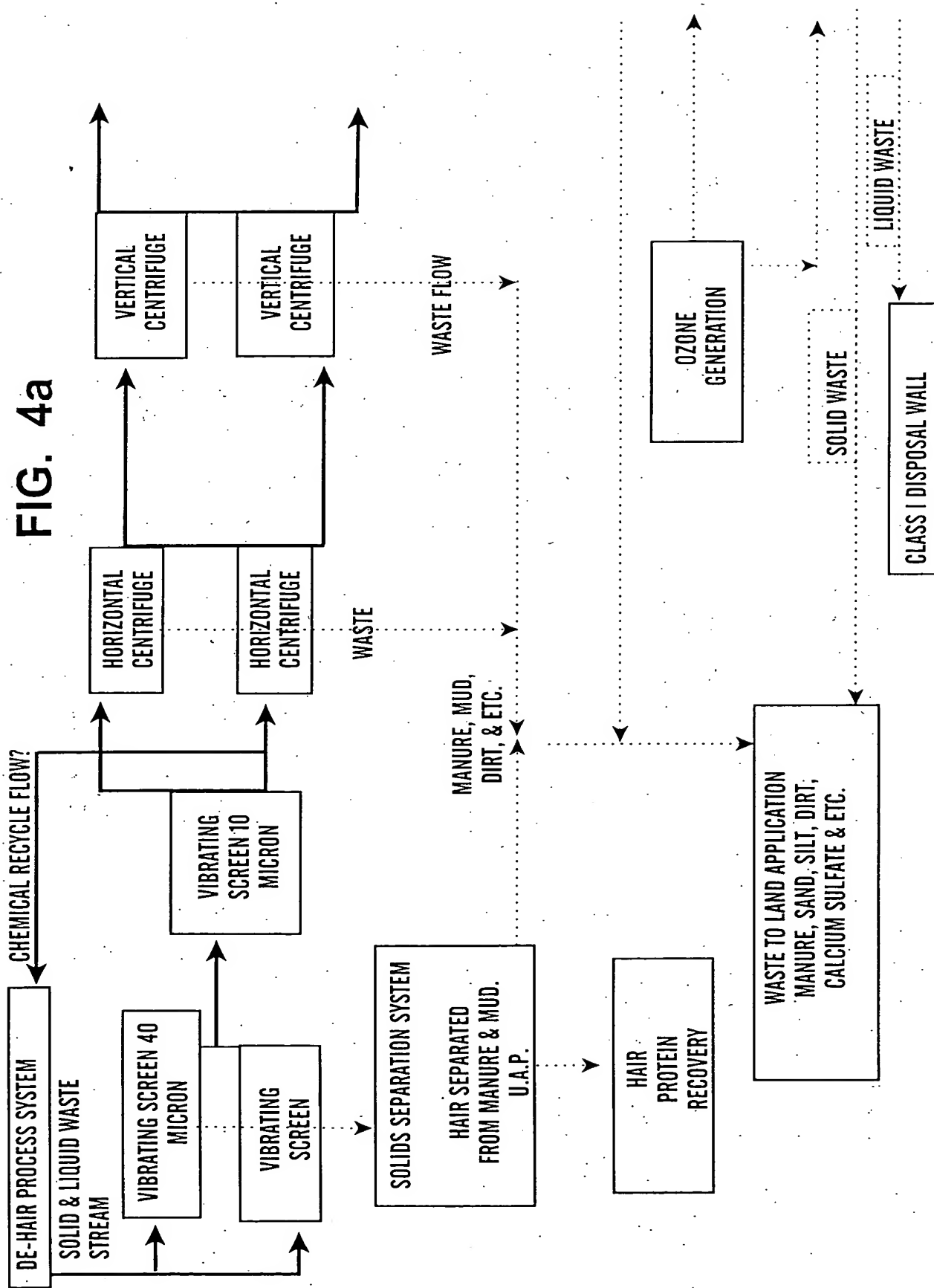


FIG. 4b

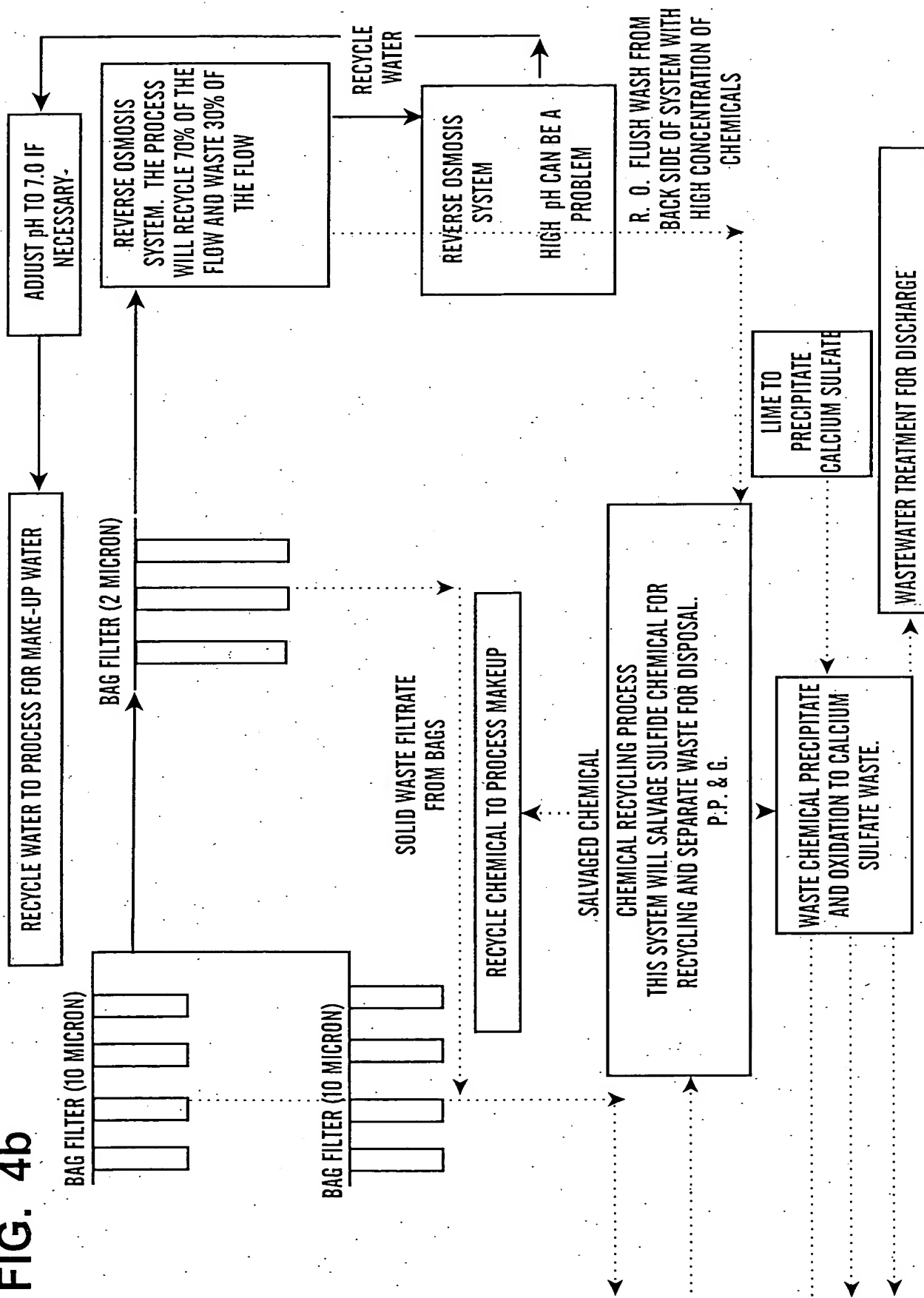




FIG. 5a

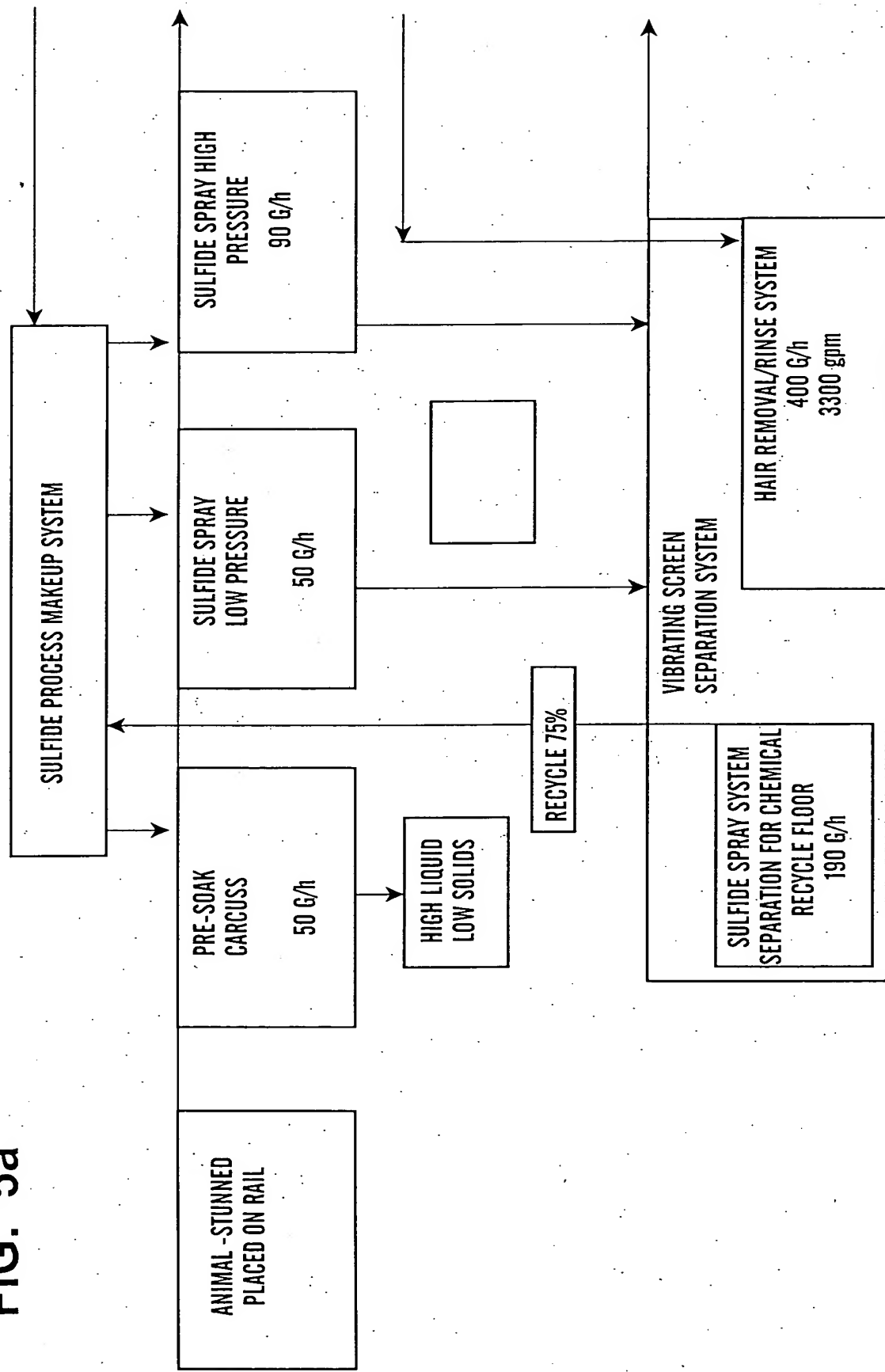
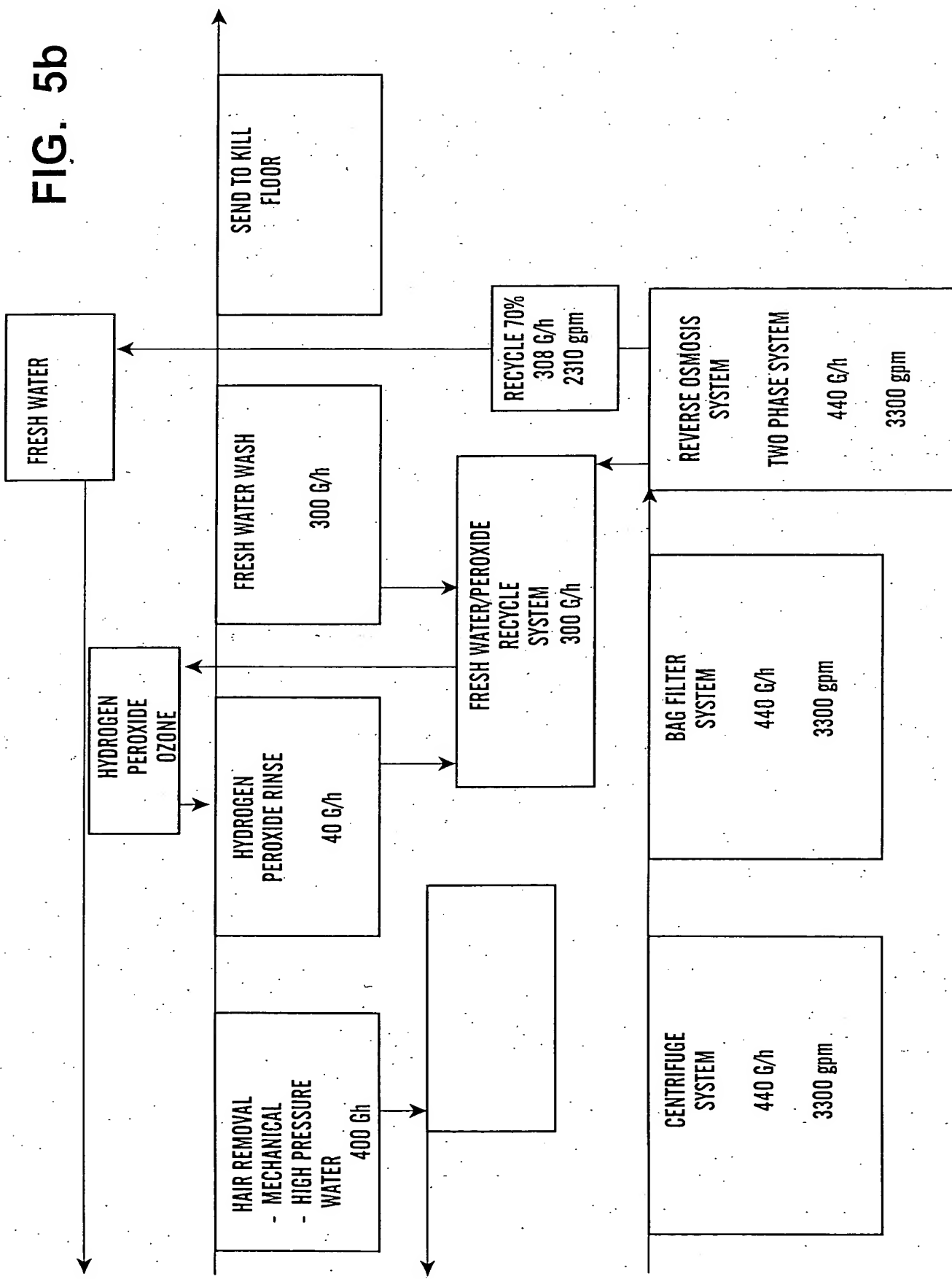


FIG. 5b



# CHEMICAL RECYCLE PROCESS

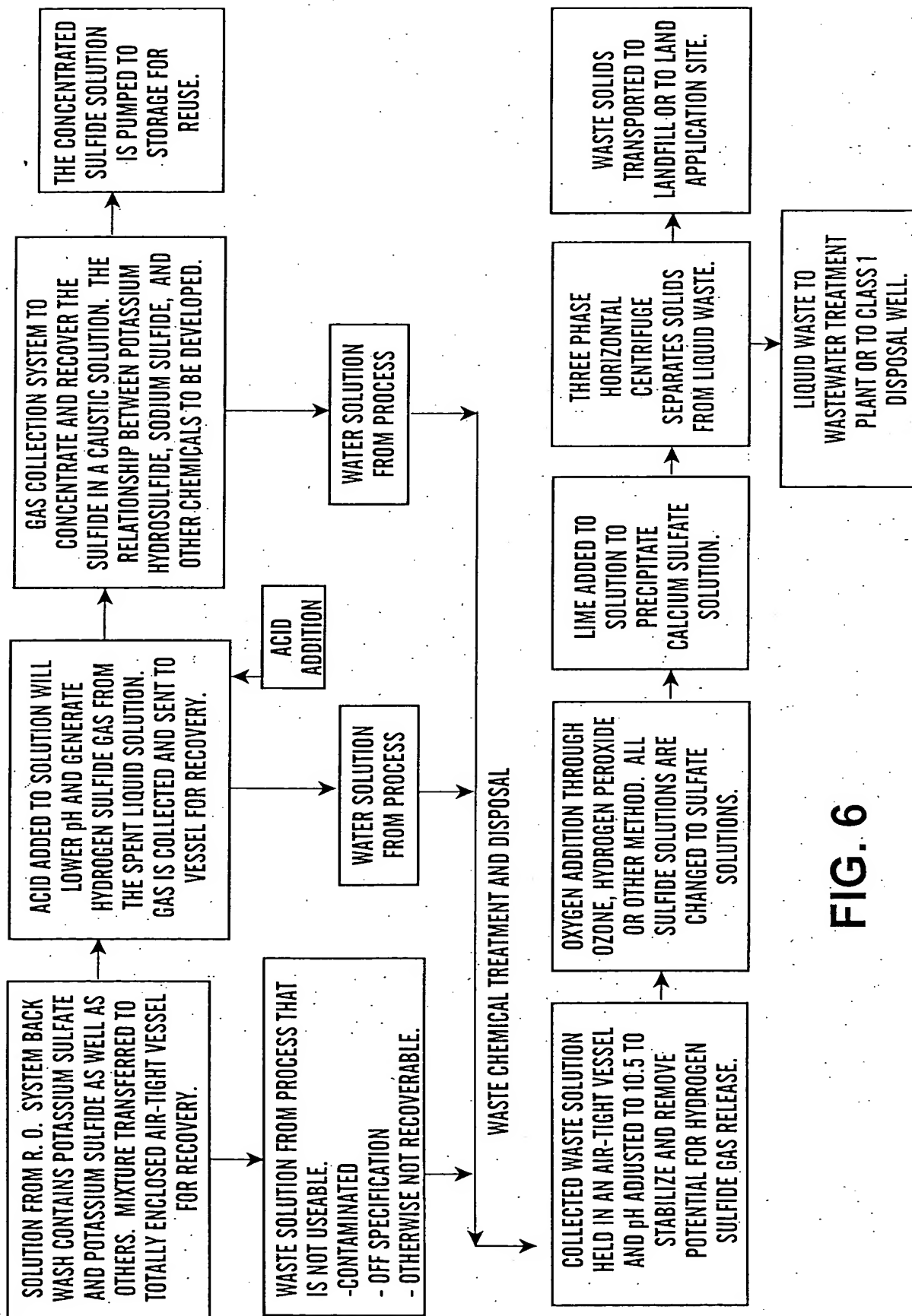
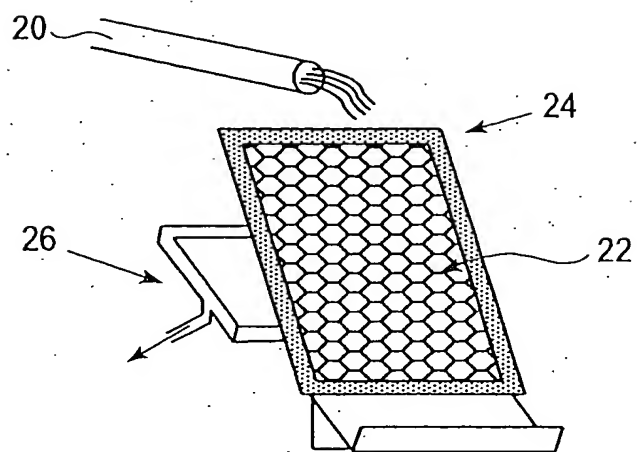
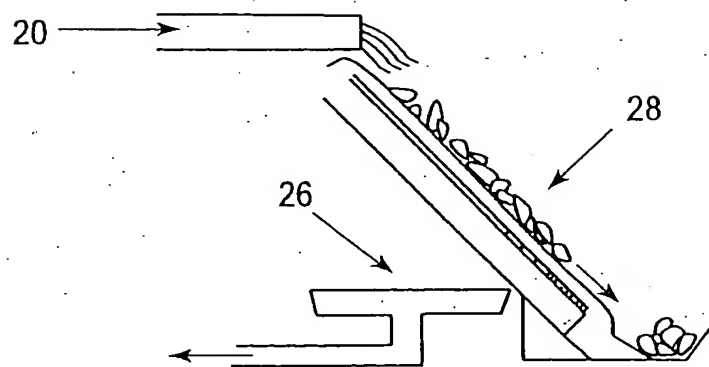


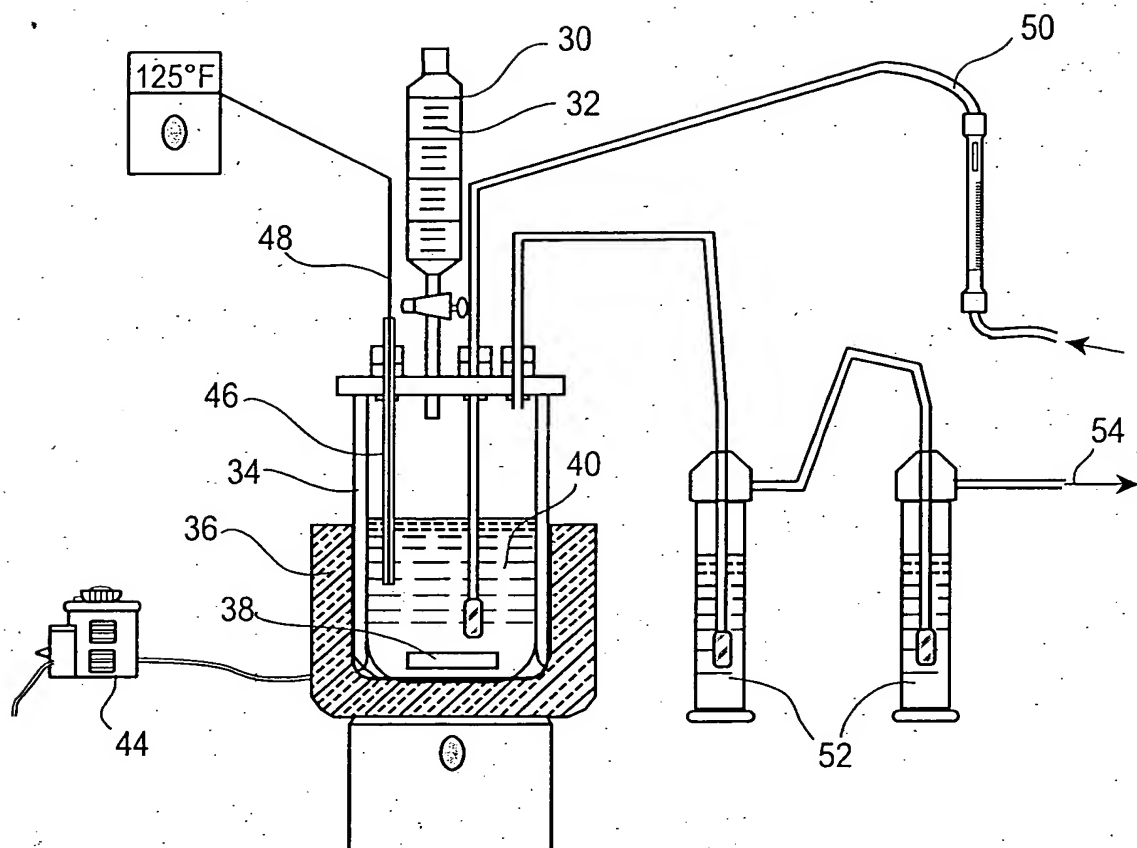
FIG. 6



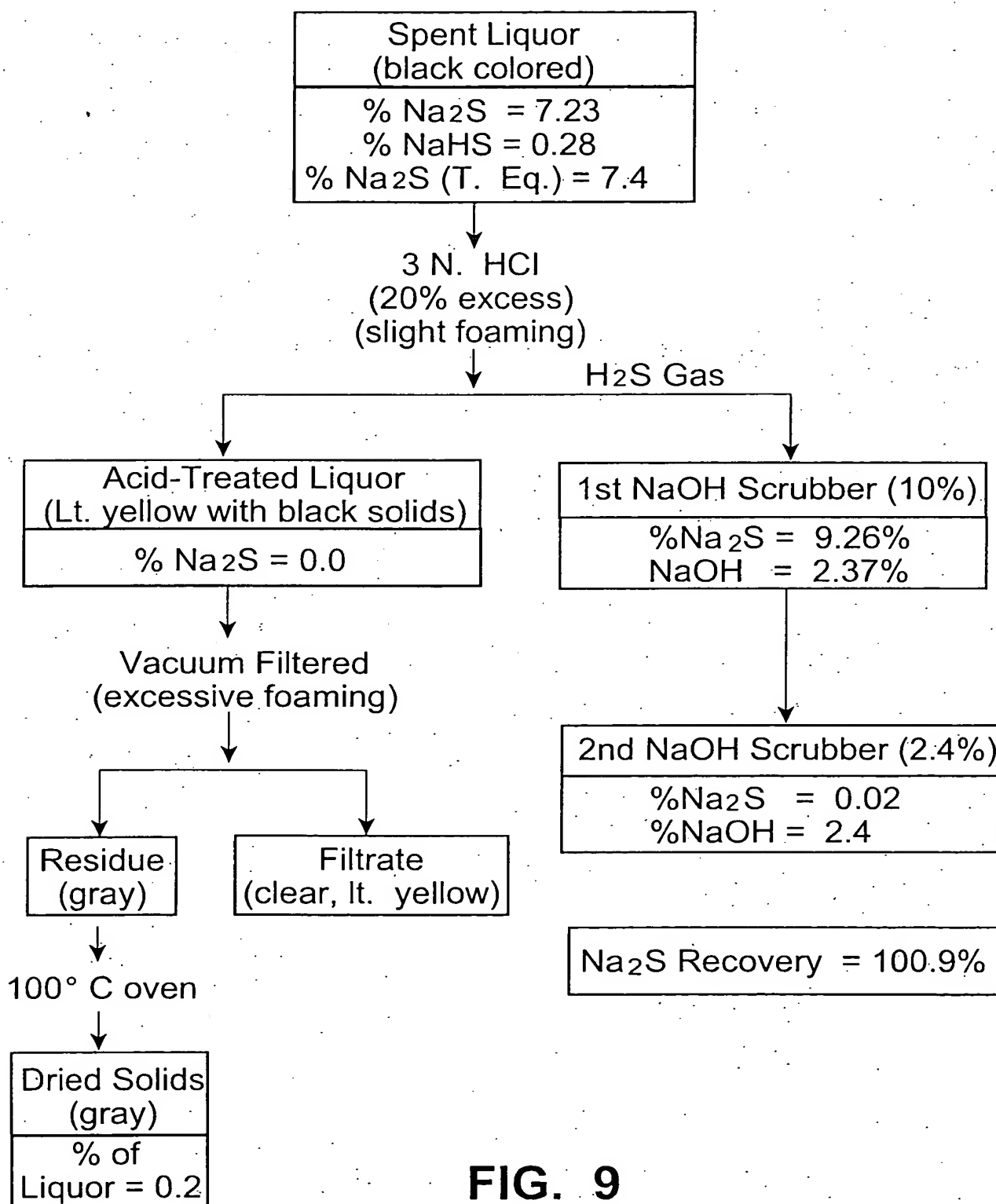
**FIG. 7a**



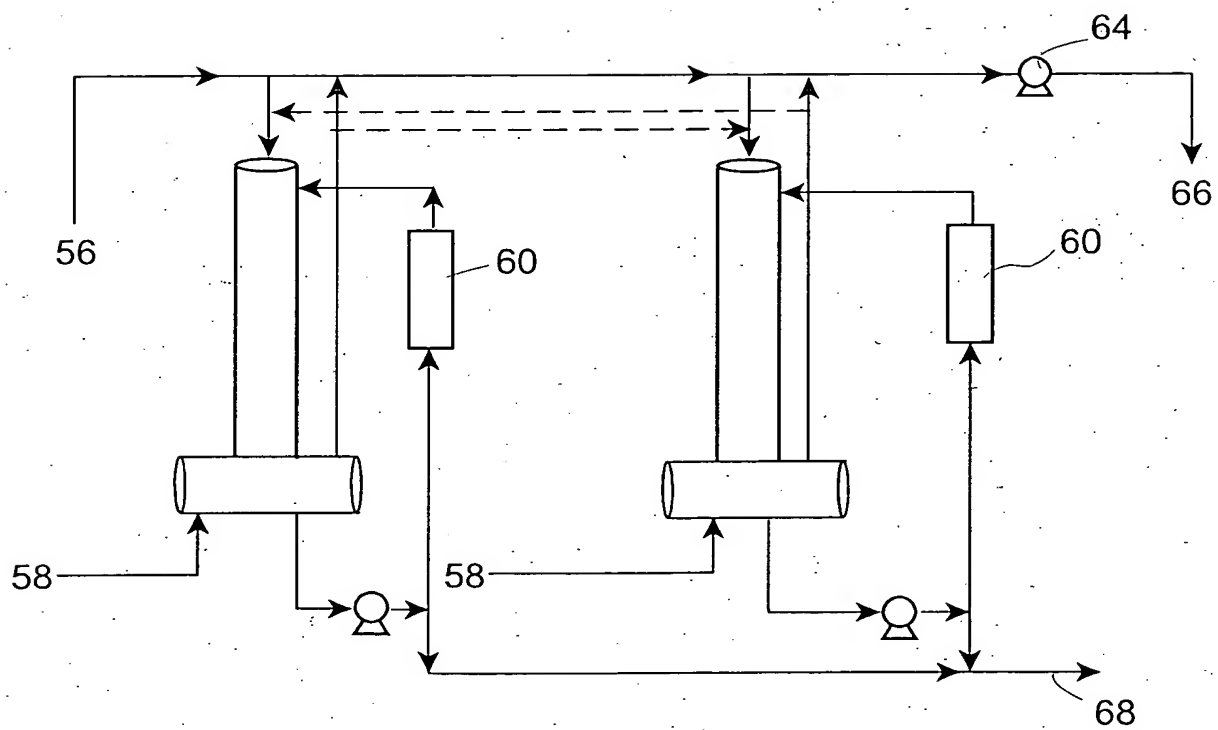
**FIG. 7b**



**FIG. 8**



**FIG. 9**



**FIG. 10**